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10/786,480	02/26/2004	Shin-ichi Uehara	Q80068	3109

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EXAMINER

NGUYEN, KEVIN M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,480	Applicant(s) UEHARA ET AL.	
	Examiner Kevin M. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Response to applicant's amendment/argument filed on 9/6/2007 has been fully considered and are not persuasive. The rejections of claims 1-16 are maintained.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Woodgate et al (US 7,058,252 hereafter Woodgate).

3. **As to claim 1**, figures 44 and 46 of Woodgate teaches an image display device comprising:

a light source (60);

a display panel (a pixel plane 468, fig. 43) disposed in front of said light source and having a plurality of pixel sections (460, 456) in the form of a matrix (fig. 44), each of said pixel sections including a first pixel for displaying an image for the first viewpoint (434, fig. 42) and a second pixel (440) for displaying an image for the second viewpoint, said second pixel being disposed at a position apart from said first pixel in a first direction; and

an optical unit (lens 138, fig. 46) disposed in front of said display panel for deflecting light emitted from said first and second pixels in the first direction (332),

wherein each of said first and second pixels (one pixel in fig. 44) includes a transmissive region (456) for transmitting the light emitted from said light source to said optical unit and a reflective region (460) for reflecting the exterior light incident from the front to said optical unit, and wherein said transmissive region and said reflective region are arranged in a second direction (333) perpendicular to the first direction in each pixel (a horizontal gap 333 is perpendicular to a vertical gap 332), as discussed in col. 52, lines 20-53.

As to claim 2, Woodgate teaches an image display device according to claim 1, wherein said optical unit is a lenticular lens (the lenticular screen, col. 49, line 49) in which a plurality of cylindrical lenses is arranged in the first direction (332), said cylindrical lenses being disposed in each line in which said pixel sections extend in the second direction (333) corresponding to the longitudinal direction of said cylindrical lens (the lenticular screen, col. 5, lines 19-31, and col. 49, line 49).

As to claim 3, Woodgate teaches an image display device according to claim 1, wherein said optical unit is a parallax barrier (the parallax barrier, col. 3, line 30—col. 4, line 8, and col. 49, line 50) in which a plurality of slits is arranged in the first direction, said slits being formed for each line in which said pixel sections extend in the second direction corresponding to the longitudinal direction of said slit (the slit of the parallax barrier, col. 4, lines 1-8, and col. 49, lines 39-50).

4. **As to claim 4**, Woodgate teaches an image display device comprising:

a light source (60, fig. 46);

a display panel (a pixel plane 468, fig. 43) disposed in front of said light source and having a plurality of pixel sections (456, 460) in the form of a matrix (fig. 44), each of said pixel sections including at least a first pixel for displaying an image for the first viewpoint (434 for a first viewer) and a second pixel for displaying an image for the second viewpoint (440 for a second viewer), said second pixel being disposed at a position apart from said first pixel in a first direction (332); and

a parallax barrier (the parallax barrier, col. 49, lines 39-50) interposed between said light source and said display panel, said parallax barrier being formed by arranging a plurality of slits for deflecting the light emitted from said light source in the first direction (332), in which case, said slits are disposed in each line of said pixel sections (456, 460) extending in a second direction (333) perpendicular to the first direction, said second direction (333) being the longitudinal direction of said slits (the slits of the parallax barrier, col. 4, lines 1-8),

wherein each of said first and second pixels (456, 460) includes a transmissive region (456) for transmitting the light emitted from said light source (60) and passed through slits of said parallax barrier to the front and a reflective region (460) for reflecting the exterior light incident from the front to the front, and wherein said transmissive region and said reflective region are arranged in the second direction (333) in each pixel (one pixel in fig. 44), as discussed in col. 52, lines 20-53.

As to claim 5, Woodgate teaches an image display device according to claim 1, wherein each of said transmissive region 456 and said reflective region 460 is divided into a plurality of sub-regions (a red pixel 326, a green pixel 330, and a blue pixel 328) for color different from each other, and sub-regions for the same color are arranged along the first direction (332, col. 47, col. 24-31, and col. 52, lines 29-48).

As to claim 6, Woodgate teaches an image display device according to claim 4, wherein each of said transmissive region 456 and said reflective region 460 is divided into a plurality of sub-regions for color different from each other (a red pixel 326, a green pixel 330, and a blue pixel 328), and sub-regions for the same color are arranged along the first direction (332, col. 47, col. 24-31, and col. 52, lines 29-48).

As to claim 7, Woodgate teaches an image display device according to claim 1, wherein each of said transmissive region 456 and said reflective region 460 is divided into a plurality of sub-regions for color different from each other (a red pixel 326, a green pixel 330, and a blue pixel 328), and sub-regions for the same color are arranged along the second direction (333, col. 47, col. 24-31, and col. 52, lines 29-48).

As to claim 8, Woodgate teaches an image display device according to claim 4, wherein each of said transmissive region 456 and said reflective region 460 is divided into a plurality of sub-regions for color different from each other (a red pixel 326, a green pixel 330, and a blue pixel 328), and sub-regions for the same color are arranged along the second direction (333, col. 47, col. 24-31, and col. 52, lines 29-48).

As to claim 9, Woodgate teaches an image display device according to claim 5, wherein each of said at least one transmissive region 456 and said at least one reflective region 460 is divided into a red sub-region, green sub-region and blue sub-region (a red pixel 326, a green pixel 330, and a blue pixel 328, col. 47, col. 24-31, and col. 52, lines 29-48).

As to claim 10, Woodgate teaches an image display device according to claim 1, wherein said display panel is a liquid crystal display panel, col. 48, lines 1-3.

As to claim 11, Woodgate teaches an image display device according to claim 1, wherein said first direction is a horizontal direction of a display plane (the horizontal gap 333, fig. 44).

As to claim 12, Woodgate teaches an image display device according to claim 11, wherein said image for said first viewpoint is an image for the left eye 444 and said image for said second viewpoint is an image for the right eye 446 which has a parallax with respect to said image for the right eye to thereby provide a three-dimensional image, as described in col. 51, line 51 through col. 52, line 3.

As to claim 13, Woodgate teaches an image display device according to claim 1, wherein said first direction is a vertical direction of a display plane (the vertical gap 332, fig. 44).

As to claim 14, Woodgate teaches a portable terminal device including said image display device according to claim 1, laptop computer, as described in col. 1, lines 10-18.

As to claim 15, Woodgate teaches a portable terminal device according to claim 14, wherein said portable terminal device is any one of a cellular phone, portable terminal, PDA, game device, digital camera and digital video camera, as described in col. 1, lines 10-18.

5. **As to claim 16**, Woodgate teaches a display panel comprising a plurality of pixels (456, 460, fig. 44) in the form of a matrix, wherein each pixel includes a transmissive region (456) for transmitting light and a reflective region (460) for reflecting light, each of said transmissive region (456) and said reflective region (460) is divided into a red sub-region (326), green sub-region (330) and blue sub-region (328) and wherein the array direction (the array of gaps 332 and 33) of said transmissive region (456) and reflective region (460) is the same as that of said red sub-region (326), said green sub-region (330) and said blue sub-region (328) in each pixel, as described in col. 47, lines 24-31, and col. 52, lines 29-48.

As to claim 17, Woodgate teaches the image display device of claim 1, wherein an area of the transmissive region is equal to an area of the reflective region (see figure 44, transmissive pixel 456 is equal to the reflective pixel 460).

As to claim 18, Woodgate teaches the image display device of claim 4, wherein an area of the transmissive region is equal to an area of the reflective region (see figure 44, transmissive pixel 456 is equal to the reflective pixel 460).

As to claim 19, Woodgate further teaches the image display device according to claim 1, wherein said transmissive regions in said pixel sections are arranged in a line in the first direction, and said reflective regions in said pixel sections are arranged in a line in the first direction, and each said line of said transmissive region and each said line of said reflective region alternates repeatedly in the second direction. Column 54, lines 42-57 of Woodgate further teaches

“In operation in the first mode, the external light source is substantially focussed by the lenses 138 as an array of images on to the deflecting reflector regions 518 substantially in the image plane of the array of images. These regions may for example comprise a diffusing reflector, for example a roughened metallised surface so as to provide a deflection of the light source. In particular, the deflector may provide horizontal deflection properties only, while the lenses provide diffusion in the vertical direction. The deflecting reflector 518 thus has the function of deflecting the light from the first lens aperture 541 to a second lens aperture 543, which is different from the lens aperture to which the first lens aperture 541 forming the image would be imaged by a planar reflector extending along the image plane. This is described in more detail below with reference to FIGS. 51a and 51b.”

As to claim 20, Woodgate further teaches the image display device according to claim 4, wherein said transmissive regions in said pixel sections are arranged in a line in the first direction, and said reflective regions in said pixel sections are arranged in a line in the first direction, and each said line of said transmissive region and each said line of

said reflective region alternates repeatedly in the second direction. Column 54, lines 42-57 of Woodgate further teaches

“In operation in the first mode, the external light source is substantially focussed by the lenses 138 as an array of images on to the deflecting reflector regions 518 substantially in the image plane of the array of images. These regions may for example comprise a diffusing reflector, for example a roughened metallised surface so as to provide a deflection of the light source. In particular, the deflector may provide horizontal deflection properties only, while the lenses provide diffusion in the vertical direction. The deflecting reflector 518 thus has the function of deflecting the light from the first lens aperture 541 to a second lens aperture 543, which is different from the lens aperture to which the first lens aperture 541 forming the image would be imaged by a planar reflector extending along the image plane. This is described in more detail below with reference to FIGS. 51a and 51b.”

Response to Arguments

6. Applicant's arguments filed 9/6/2007 have been fully considered but they are not persuasive.

Applicant argues that “Woodgate does not disclose the emitted light is deflected in the direction in which the first and second pixels are disposed away from each other” found on page 7-10 or claims 1 and 4 recited “an optical unit disposed in front of said display panel for deflecting light emitted from said first and second pixels in the first direction.” These are not found to be persuasive. The broad limitation “a first direction” and “a second direction” could be considered any directions in space coordinates X, Y, and Z such as a diagonal direction, a circle direction or a curve direction. More specific,

column 54, lines 42-57 of Woodgate further teaches: a horizontal direction, and a vertical direction.

“In operation in the first mode, the external light source is substantially focussed by the lenses 138 as an array of images on to the deflecting reflector regions 518 substantially in the image plane of the array of images. These regions may for example comprise a diffusing reflector, for example a roughened metallised surface so as to provide a deflection of the light source. In particular, the deflector may provide horizontal deflection properties only, while the lenses provide diffusion in the vertical direction. The deflecting reflector 518 thus has the function of deflecting the light from the first lens aperture 541 to a second lens aperture 543, which is different from the lens aperture to which the first lens aperture 541 forming the image would be imaged by a planar reflector extending along the image plane. This is described in more detail below with reference to FIGS. 51a and 51b.”

Accordingly, a horizontal defection corresponds to defecting in a first direction as claimed, and a vertical defection corresponds to defecting in a second direction as claimed.

7. Applicant's arguments with respect to claims 19-20 have been considered but are moot in view of the new ground(s) of rejection. With respect to new claims 19-20, where is in the specification, the embodiment, the figure, and the corresponding elements which support the new claims 19-20?

For these reasons, the rejections of claims 1-20 based on Woodgate are maintained.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor RICHARD A. HJERPE can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMN
October 31, 2007

Kevin M. Nguyen
Patent Examiner
Art Unit 2629

A handwritten signature in black ink, appearing to read 'Kevin M. Nguyen', with a stylized, cursive script.

KEVIN M. NGUYEN
Patent Examiner
Art Unit 2629